Power Plant Research Program Study of the Maryland Renewable Energy Portfolio Standard

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PPRAC Meeting

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Agenda

- History of Maryland's RPS
- Current and Past Maryland RPS Requirements
- HB 1414
- Study Topics, and New Report Topics
- Maryland RPS Work Group
- Interim Report
- Next Steps
- Final Report Review Process

History of Maryland's RPS

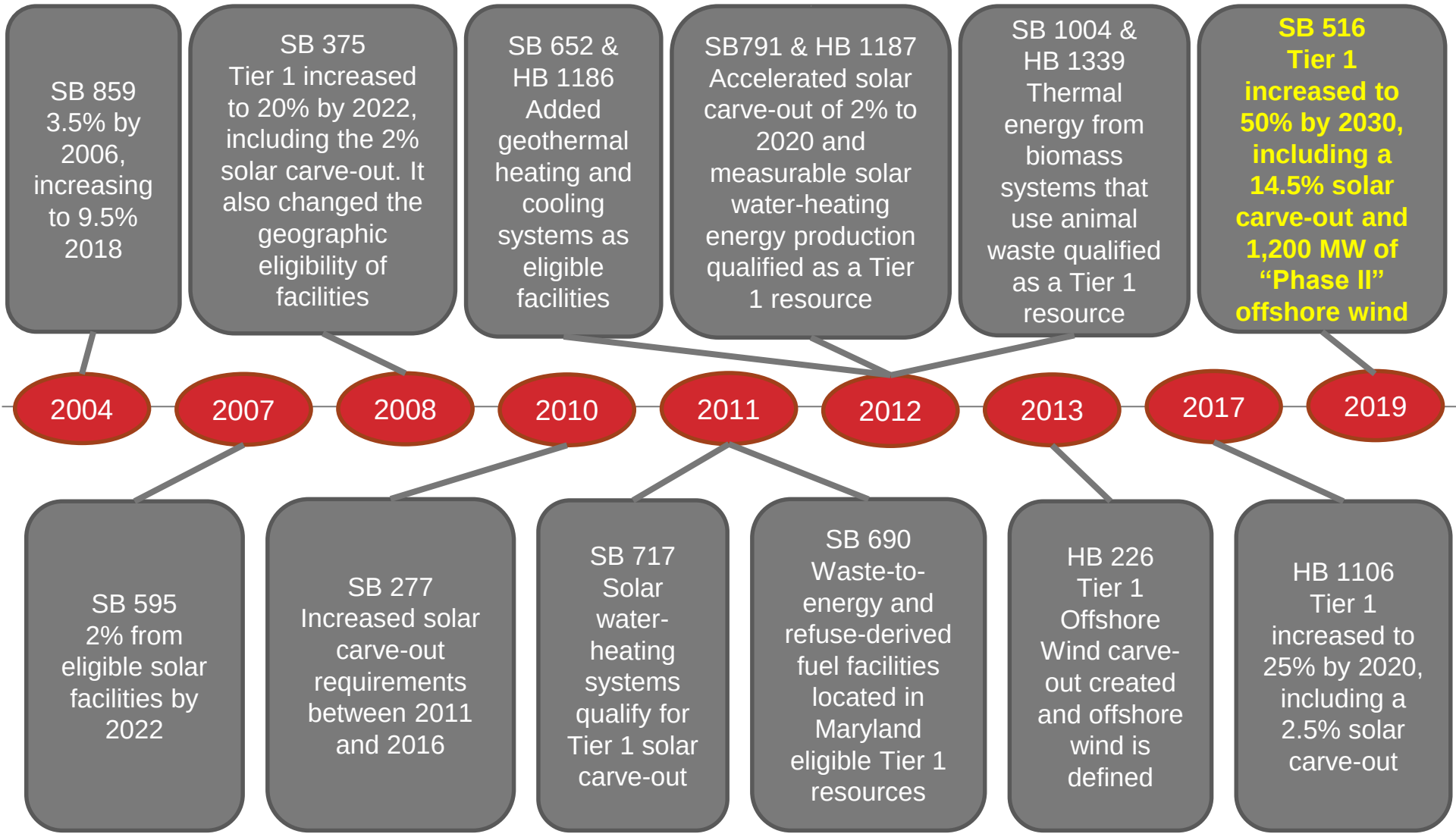
Definition:

Maryland's Renewable Energy Portfolio Standard (RPS) – requires Maryland electric utilities and retail suppliers to obtain renewable energy credits (RECs) equivalent to a percentage of their retail sales

- In 2004, the Maryland General Assembly enacted the Maryland Renewable Energy Portfolio Standard and Credit Trading Act (RPS Act)
- The Maryland General Assembly has modified the Maryland RPS several times since enactment

Maryland's RPS History

MARYLAND DEPARTMENT OF NATURAL RESOURCES



Previous Maryland RPS Requirements

- By 2020, 25 percent of electric retail sales must be satisfied by renewable energy (22.5 percent Tier 1, 2.5 percent Tier 2)
- For Tier 1, 2.5 percent must be satisfied by solar resources, and up to 2.5 percent may come from offshore wind
- The Tier 2 renewable energy requirement expired at the end of 2018

HB1414

- In 2017, the General Assembly passed HB 1414, and the Governor enacted in the 2017 Acts of Maryland Ch 393:

  Power Plant Research Program "shall conduct a study of the [Renewable Portfolio Standard] RPS… The study shall be a comprehensive review of the history, implementation, overall costs and benefits and effectiveness of the RPS in relation to the energy policies of the state."

- RPS Study deliverables to the Office of the Governor, the Senate Finance Committee and House Economic Matters Committee.

Final Report Requirements in HB 1414 passed in 2017.

- Ratepayer impacts from long-term contracts
- Role and effectiveness the RPS may have in reducing the carbon content of imported electricity
- Role of in-state clean energy in achieving greenhouse gas emission reductions
- Net environmental and fiscal impacts associated with long-term contracts with clean energy projects
- Industries that may grow, and to what extent, as a result of RPS incentives
- Local job growth opportunities resulting from the RPS
- Equitable distribution of public health and environmental benefits across environmental justice communities
- System flexibility requirements needed under future goals to handle peak and ramping capabilities
- Changes in solar renewable energy credit (SREC) prices over the 24 months preceding the Interim RPS Report
- The state's likelihood to meet existing goals and potential future goals with and without the inclusion of certain technology
- Energy storage technologies

Maryland RPS Study Work Group

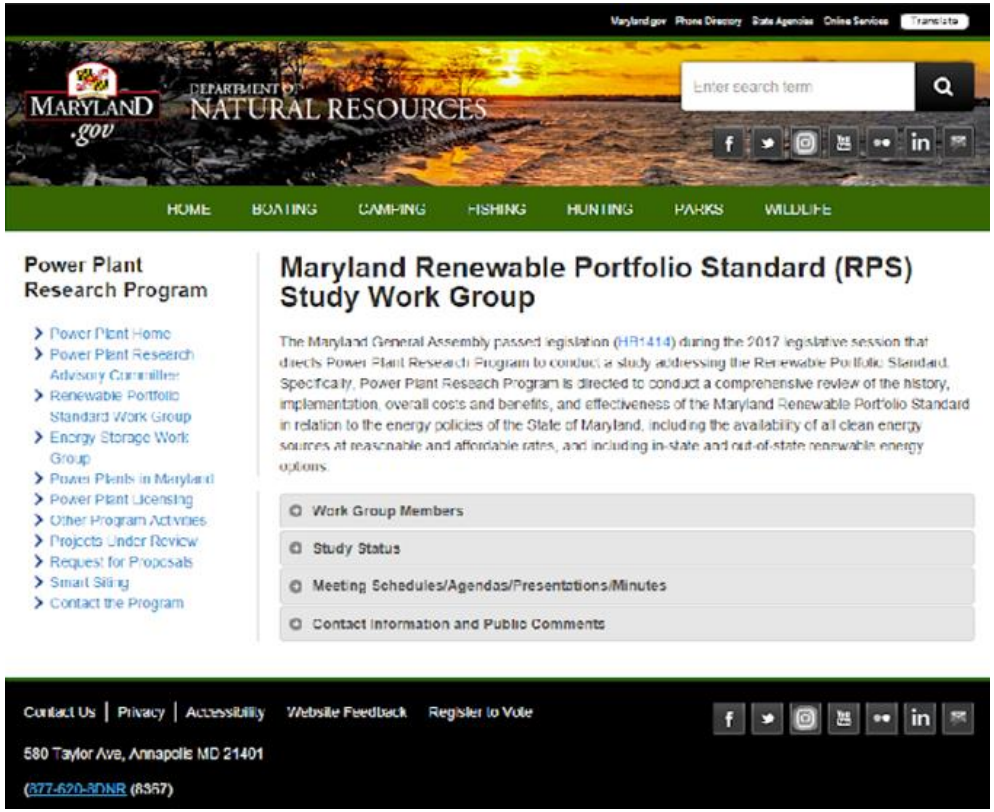
- PPRP organized the Maryland RPS Study Work Group, which includes representatives from the following:
  - Federal, state, and county government agencies
  - Renewable energy companies
  - Industry trade associations
  - Electric utilities
  - Environmental groups
  - Consultants and members of the public

- Webinars held on April 26 and on Nov. 14, 2018

- In-person meetings were held on June 18 and Aug. 29, 2018

Maryland RPS Study Work Group

- Throughout the process PPRP will seek input and feedback from stakeholders.
- PRPP welcomes any data or studies stakeholders may have or would like to contribute.
- Webpage located at dnr.maryland.gov/pprp/Pages/RPS-WorkGroup.aspx



Interim RPS Report

- The purpose of the Interim RPS Report was to update the General Assembly on the focus of PPRP's efforts to date and to document the steps for completing the final report

- The following Agencies reviewed the Draft Interim Report and provided feedback:
  - Department of Natural Resources Power Plant Research Program
  - Maryland Energy Administration
  - Maryland Public Service Commission
  - Maryland Office of People's Counsel
  - PJM Interconnection, Inc.

- PPRP presented the Final Interim RPS Report to the House Economic Matters Committee in February 2019.

RPS Study - Next Steps

- Work to be completed for the final RPS report will include, but is not limited to the following:
  - Input-output modeling to estimate direct and indirect economic impacts of the Maryland RPS
  - Analysis of long-term contracts for renewable energy generation in other states and potential impacts on ratepayers in Maryland
  - Assessment of other regulation and market-based policies, such as tax credits, loans and grants, that can further the legislative intent of the Maryland RPS
  - Discussion of the role of energy storage and other flexibility resources in promoting renewable energy and Maryland's energy policies
  - Assessment of the performance of the Maryland RPS and the advantages and disadvantages of various options for changing the Maryland RPS

Clean Energy Jobs Act of 2019

- Raises the Maryland RPS to 50 percent by 2030
  - Solar carve-out of 14.5% by 2028
  - Offshore wind carve-out to be determined by PSC but must not be less than 1,200 MW of new offshore wind
- Tier 2 extended - expires at the end of 2020

Three New RPS Additions within the Clean Energy Jobs Act

- The impact of [in-state clean energy] on ratepayers with respect to the requirement of in-state clean energy generation as an increasing percentage of the standard.

- The impact of all energy sources that qualify under the standard with respect to the requirement of in-state clean energy generation as an increasing percentage of the standard.

- An assessment of the costs, benefits, and any legal or other implications of allowing the location anywhere in or off the coast of the contiguous United States of Tier 1 renewable sources that are currently required to be located in the PJM region, or in a control area that is adjacent to the PJM region, if the electricity is delivered into the PJM region.

Final Report Review Process

- Potential future webinars of the Maryland RPS Study Work Group will be scheduled to discuss draft results from:
  - Input/output modeling
  - Environmental Justice
  - Long term contracts (PPAs)
- Details to be announced
- Due to General Assembly by December 1, 2019

“Supplemental” RPS Study from the Clean Energy Jobs Act

- Assess the overall cost and benefits of increasing the RPS to 100% by 2040
- Incorporates all requirements from current RPS study.
- Requires the study of the impact of a 100% RPS on industries and communities as well as a plan to provide a transition for impacted workers and communities
- Due to the General Assembly by January 1, 2024

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